

HERMES DECLARATION EXHIBIT 6

Deposition of:
Dr. Mark G. Steckel

January 26, 2006

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UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
C.A. NO. 04-12457 PBS

**TRAVEL
TRANSCRIPT**

DePUY MITEK, INC.,)
Plaintiffs,)
)
vs.)
)
ARTHREX, INC., a Delaware)
corporation,)
Defendants.)

DEPOSITION of DR. MARK G. STECKEL,
called as a witness by and on behalf of the
Defendant, pursuant to the applicable provisions of
the Federal Rules of Civil Procedure, before P.
Jodi Ohnemus, Notary Public, Certified Shorthand
Reporter, Certified Realtime Reporter, and
Registered Merit Reporter, within and for the
Commonwealth of Massachusetts, at the Courtyard
Marriott, 423 Speen Street, Natick, Massachusetts,
on Thursday, 26 January, 2006, commencing at 10:44
a.m.

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1 in college. My next professional assignment --
2 **Q. Generally when you were at Gentex, what**
3 **kind of -- what kind of work were you doing?**
4 A. Right. Product development, using
5 high-tenacity fibers, aromids, polyethylenes, that
6 type of --
7 **Q. Okay.**
8 A. Okay. Then I moved to -- after -- after
9 MIT, I took a position as a senior scientist at
10 Chemfab in Merrimack, New Hampshire, where I also
11 worked on protective clothing and fluoropolymer
12 composites.
13 **Q. What are fluoropolymers?**
14 A. Fluoropolymers are a generic class of
15 polymers that contain fluorine that include PFE,
16 FEP, PFA, high -- high-performance plastics, many
17 of which are made by Dupont.
18 **Q. Okay. And what was the name of that**
19 **company?**
20 A. Chemfab, C-h-e-m-f-a-b.
21 **Q. And when did you work for them?**
22 A. To the best of my recollection, I started
23 in 1984 and finished in 1987.
24 **Q. And what kind of products were you working**
25 **on there?**

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1 A. I was working on protective clothing --
2 chemical protective clothing and on architectural
3 materials.
4 **Q. What do you mean by that?**
5 A. One of Chemfab's businesses is the
6 fluoropolymer membrane that's used on the large
7 sports stadiums, such as the Metro dome or the
8 Carrier Dome.
9 **Q. Part of the roof?**
10 A. It is the roof.
11 **Q. Okay.**
12 A. It's an interesting technology. It's an
13 interesting fluoropolymer reinforced technology.
14 **Q. And what was your responsibilities? You**
15 **said you were a senior engineer. What did you do?**
16 A. Yeah. Again, it was product development,
17 and it was small company environment, so
18 responsibilities were designing the products,
19 executing prototyping, transferring into
20 manufacturing.
21 **Q. I take it that neither of these jobs**
22 **involved any products in the medical field?**
23 A. Correct.
24 **Q. Okay. What came next?**
25 A. After Chemfab came an assignment with

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1 Ciba-Geige in Anaheim, California. That was in the
2 field -- also in the field of high-performance
3 composites, nonmedical; again, very high-strength
4 fibers, reinforced, most -- plastics, mostly for
5 aerospace applications.
6 **Q. What kind of high-strength fibers were you**
7 **working with then?**
8 A. Primarily carbon fibers and aramid.
9 **Q. You've used the term aramid a couple of**
10 **times today. What are aramids?**
11 A. Aramids are aromatic nylons, and they are
12 high-strength nylons used typically for either body
13 armor or very high-strength plastics.
14 **Q. Are there some names of some products?**
15 A. Yes. The most common one is Kevlar. It's
16 a Dupont trade name. K-e-v-l-a-r.
17 MR. SABER: Off the record.
18 (Discussion off the record.)
19 **Q. Okay. So -- and what was your -- what was**
20 **your role at Ciba-Geige?**
21 A. Ciba-Geige, I was actually in market
22 development, and it involved working with the major
23 aerospace equipment suppliers in terms of finding
24 new markets for these materials and their products.
25 **Q. So, you actually weren't developing the**

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1 **products?**
2 A. I was less developing products. I was
3 more working with customers, trying to marry the
4 technology to their needs.
5 **Q. Why were you working in the marketing**
6 **field at that point or marketing --**
7 A. Yeah. No, it was some -- it was an
8 interest I had, and it was still very technical
9 marketing.
10 **Q. All right.**
11 A. But I thought at that point I wanted to be
12 a marketing person.
13 **Q. All right. I take it from the next thing**
14 **you're going to tell me you went back to being more**
15 **technical?**
16 A. Yeah, it was fun.
17 **Q. What came next?**
18 A. Next came --
19 **Q. How long were you at Ciba-Geige?**
20 A. Just one year.
21 **Q. That -- so that was about '80 --**
22 A. '88.
23 **Q. '87, '88?**
24 A. Yes. '88 I joined Johnson & Johnson at
25 their Ethicon division, suture division in

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1 Somerville, New Jersey; and my responsibilities
2 were in suture research and specifically on braided
3 suture product development.
4 **Q. When in 1988 did you begin at Johnson &**
5 **Johnson, or Ethicon --**
6 **A. Yeah.**
7 **Q. -- to be more precise?**
8 **A. Let me just -- oh, I know. February 29th**
9 **of 1980. It happened to be a leap year, so I only**
10 **had an anniversary every four years.**
11 **Q. Every now and then you get something like**
12 **that that helps.**
13 **A. Right.**
14 **Q. And how long were you at Ethicon -- was**
15 **that the first time that you had worked with -- in**
16 **the medical field?**
17 **A. Yeah, that was my first formal medical**
18 **device job.**
19 **Q. And I would assume it's obviously the**
20 **first time that you worked with sutures.**
21 **A. Yes.**
22 **Q. Is it the first time you had worked with**
23 **braided materials?**
24 **A. No. I had used braids extensively in**
25 **Ciba-Geige and less so at -- but some -- at Gentex,**

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1 and prior to that I had published some papers with
2 my undergraduate professor in the field of
3 three-dimensional braids as an undergraduate.
4 **Q. Let me -- let me go back and ask you about**
5 **some of your professional writings, if I may. Have**
6 **you -- how often -- have you been published?**
7 **A. Yes.**
8 **Q. And how often?**
9 **A. Maybe five, six articles spread between**
10 **peer-review journals, trade journals, proceedings**
11 **of technical meetings.**
12 **Q. Could you tell me about what you can talk**
13 **-- as many of the articles that you can tell me**
14 **about -- it's not that many -- so what their**
15 **subjects were.**
16 **A. Right. So, dating back to -- the early**
17 **articles were -- there was one on a technology**
18 **called triaxial woven materials. That was back as**
19 **an undergraduate, and one on three-dimensional**
20 **braids --**
21 **Q. Before we go forward --**
22 **A. Please. Sure.**
23 **Q. -- on those, let me just get a little more**
24 **detail on that. A triaxial woven material, what is**
25 **that?**

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1 **A. Yeah, that is -- most conventional welding**
2 **materials have two sets of yarns that interlace at**
3 **a 90 degree angle. The triaxial wovens had three**
4 **sets of yarns that essentially interlace at 120 or**
5 **60 degrees, depending which angle you want to take,**
6 **but three sets of yarns.**
7 **Q. And was this for clothing?**
8 **A. This was actually for inflated structures,**
9 **inflatable --**
10 **Q. What does that mean?**
11 **A. Such as architectural -- air-supported**
12 **architectural stadiums, tennis courts inflatables**
13 **like, you know, military dirigibles and blimps,**
14 **those type of products.**
15 **Q. None of that involve -- those were not**
16 **braided materials?**
17 **A. Those were not braided.**
18 **Q. And none of those were in the medical**
19 **field?**
20 **A. None of those were in the medical field.**
21 **Q. Okay. The second one that you said was**
22 **three-dimensional braids?**
23 **A. Right.**
24 **Q. And what do you mean by that?**
25 **A. These are a nonconventional braiding**

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1 technology in that most braids are tubular. You
2 have two sets of yarns interlaced so that you have
3 essentially a cylindrical structure, and they can
4 be filled with a -- core yarns. The
5 three-dimensional braids involve a structure where
6 -- essentially, a solid braid. So, you have
7 multiple carriers that are -- are moving from the
8 core into the sheathe and back, so it's -- it's
9 totally interwoven together.
10 **Q. Interwoven. You're talking about the**
11 **sheathe and the core?**
12 **A. Right. All the filaments. There's no**
13 **really distinct sheathe and core at that point.**
14 **It's just one solid braid.**
15 **And we were -- the professor that I worked**
16 **with on this was looking at these for**
17 **high-performance military composites through**
18 **medical devices, such as anterior cruciate ligament**
19 **replace and things like that.**
20 **Q. When did you do this paper?**
21 **A. This was a paper -- 1982.**
22 **Q. And was that as part of your schooling?**
23 **A. It was -- it was research related to my**
24 **schooling.**
25 **Q. Right. And which -- which -- where were**

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1 you at this point?
2 A. I was still at Philadelphia College.
3 Q. This is while you were an undergraduate?
4 A. Yes.
5 Q. And was there a paper published as a
6 result of this work?
7 A. There was a paper published in the Journal
8 of Industrial Fabrics.
9 Q. And that's under your professor's name as
10 well as yours?
11 A. Yes.
12 Q. And what was the professor?
13 A. Frank Ko, K-o.
14 Q. And do you know when -- that was in 1982,
15 did you tell me?
16 A. Yes.
17 Q. Okay. Let's go on to some of the other
18 papers.
19 A. Okay. Yeah. And I'm not clear on the
20 order of these, but there was a paper on corrosion
21 resistance of 3/16ths stainless steel after work
22 hardening. I don't believe that would be very
23 relevant for this discussion.
24 Q. Well, what is corrosion resistance?
25 A. It relates to its ability to not rust in

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1 the body and after it's been mechanically deformed.
2 Q. And when did you work on this paper?
3 A. This was approximately 1994.
4 Q. And what were the circumstances
5 surrounding this paper?
6 A. This was relating to surgical staples, and
7 I was at the time at Ethicon Endosurgery, which is
8 medical device supplier. It's part of the Johnson
9 & Johnson family. And the research was around our
10 stapling products and actually corrosion and MRI
11 compatibility.
12 Q. This paper had nothing to do with sutures,
13 I assume?
14 A. Nothing.
15 Q. And nothing had to do with braided
16 materials.
17 A. Nothing.
18 Q. Okay. Why don't you tell me about the
19 next one that you can recall.
20 A. Okay. By the way, none of the following
21 ones will have anything to do with braids.
22 Q. Okay. And will any of them have anything
23 to do with sutures?
24 A. Or sutures.
25 Q. Right.

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1 A. So, I mean, there's one on injection
2 molding of polycarbonate. That was part of an MDDI
3 meeting in New York -- Medical Device and
4 Diagnostics Industry.
5 Q. The injection molding one was when?
6 A. That one was 19 -- give me one minute here
7 -- 1992 to '96. That was either '95 or '96.
8 Q. And what journal was it published in?
9 A. That was in the proceedings of the MDDI
10 meeting.
11 Q. And the one on the corrosion resistance,
12 what was that published in?
13 A. Yeah. That's published in one of the
14 biomedical journals, but I don't have the reference
15 in front of me.
16 Q. Okay. What other -- what other
17 articles --
18 A. Yes. There was an article -- well, it was
19 actually a presentation was published. It was more
20 of a presentation than an article, but --
21 Q. Okay.
22 A. That was last year at the University of
23 Washington -- yeah.
24 Q. And what was the subject?
25 A. Well, the subject is next generation

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1 drug-eluting stents.
2 Q. Stents?
3 A. Stents, yeah. I'm trying to think of the
4 name of the Washington consortium -- the name of
5 the meeting. But it was at University of
6 Washington Seattle. It was in February of 2005.
7 Q. And are there any other ones?
8 A. No.
9 Q. On that note, let me ask you a bit about
10 patents. Are you a named inventor on any patents?
11 A. Yes.
12 Q. How many?
13 A. I believe currently it's either nine or
14 ten.
15 Q. Okay. How many of those -- let's start
16 with patents that are in the field of sutures. How
17 many are there in sutures? We're obviously going
18 to be talking about the 446 patent today. I assume
19 that's one of them.
20 A. Right. Yeah. I'm just going through my
21 -- my list of patents. That -- to my recollection,
22 that's the only one I can think of that's a direct
23 suture patent. To be honest with you, I haven't
24 looked at my list for a while.
25 Q. Sure.

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1 A. But I'm pretty sure that's the case.
2 **Q. Do any of the other patents involve**
3 **braided materials?**
4 A. I'm trying to remember on my Mitek patents
5 which involve suture anchors. If they are, it's
6 related to the -- there may be some patents
7 relating to an anchor with a suture, but to the
8 best of my recollection, that is the only one
9 that's directly on sutures.
10 **Q. The ones on suture anchors, which I**
11 **understand, of course, can have a suture, were any**
12 **of the inventive steps having anything to do with**
13 **the suture or just the anchor part?**
14 A. No, the inventive steps were anchor
15 related.
16 **Q. Suture was just a piece of the --**
17 A. Part of the deal, yeah.
18 **Q. What patents do you have on suture**
19 **anchors?**
20 A. There's an umbrella anchor patent, which
21 is the main one.
22 **Q. Do you have any sutures that deal with**
23 **high-performance fibers?**
24 MR. BONELLA: Object to form.
25 **Q. The patents -- I'm sorry. Let me restate**

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1 **that. Do you have any patents that deal with**
2 **high-performance fibers?**
3 MR. BONELLA: Object to form.
4 A. Do I have any patents? Well, other -- the
5 one that we're speaking of I think -- I believe
6 includes high-performance fibers. Beyond that, I'm
7 sorry. I -- I can't recollect my full list of
8 patents right now.
9 **Q. Okay. And do any of your patents deal**
10 **with coating -- putting coatings on materials?**
11 A. Yes.
12 **Q. Which ones?**
13 A. There's one that involves a lubricious
14 coating on a medical device. This patent sutures
15 with -- that includes coatings, and so, I can think
16 of at least two.
17 **Q. We'll, of course, talk about the 446**
18 **patent in much more detail today.**
19 A. Sure. Yeah.
20 **Q. But tell me about this other patent which**
21 **involved a lubricious coating on a medical device.**
22 A. Right. It was -- it is a patent for a
23 device which is an ancillary device for doing
24 laparoscopies surgery; and it involves a lubricious
25 coating on an -- essentially an abdominal lift

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1 device which, rather than the conventional
2 procedure, involves insufflating the abdomen to get
3 space to do the endoscopic surgery for, for
4 example, gallbladder removal; and this invention is
5 a -- is a device that goes through a hole in the
6 abdomen, mechanically lifts the abdominal wall, and
7 the lubricious coating allows for easy insertion
8 and egress of the device.
9 **Q. What do you mean by "easy insertion and**
10 **egress of the device"?**
11 A. Lower force to the surgeon and less trauma
12 through the coating lubricity.
13 **Q. Less force means that it would slide in**
14 **and slide out easier?**
15 A. Yes.
16 **Q. And less trauma to the patient means what?**
17 A. Less trauma to the patient would mean two
18 things: There is a trauma at the insertion site
19 related to just the friction of the device against
20 the tissue, if you will; also, if it's difficult to
21 insert the device, you run the risk of the device
22 causing blunt trauma to the organs underneath. So,
23 it's kind of a more controlled insertion if -- if
24 the force is lowered.
25 **Q. Do you recall the number of this patent?**

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1 A. No.
2 **Q. And do you know when you -- when it was**
3 **issued to you?**
4 A. It was part of my work at Ethicon
5 Endosurgery, which was from 1992 to '96.
6 **Q. So, the -- at least the work was done**
7 **then?**
8 A. Yes.
9 **Q. But you don't know when the patent issued?**
10 A. And the patent issued -- '96. It was no
11 later than '97.
12 **Q. Okay. Are your other -- are there any**
13 **other patents that deal with coatings, or those are**
14 **the only two that you can recall?**
15 A. Those are the only two I can recall at
16 this moment.
17 **Q. Okay. Do any of your patents deal with**
18 **the medical field generally -- devices in the**
19 **medical field or methods in the medical field, or**
20 **do all of them?**
21 A. Yeah, all of them, except one for a
22 chemical protective clothing.
23 **Q. And that's something you did early --**
24 A. That was back in Chemfab.
25 **Q. Were you a named inventor in any patent**

7 (Pages 22 to 25)

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1 applications which did not become patents?
2 A. Clarification? That would mean -- how far
3 along the process --
4 Q. Well, let me break that into two parts.
5 Let's say where you were a named inventor and no
6 patent issued and the file is now dead; you know,
7 it's not going to issue as a patent.
8 MR. BONELLA: I think you mean the
9 patent's been applied for.
10 MR. SABER: That's right.
11 Q. It was applied for but it didn't go
12 through, and it's been abandoned since.
13 A. I don't believe so.
14 Q. Okay. And are there -- anywhere you are
15 named as an inventor, they applied for a patent,
16 but it's still pending?
17 A. Yes.
18 Q. Okay. In that group, are there any that
19 have to do with sutures --
20 MR. BONELLA: Just caution you, if that's
21 information -- if there's information in these
22 patents that's -- could be secret information,
23 either it may or may not be, if it's still pending
24 before the patent office, then it might be
25 confidential information to Boston Scientific or

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1 one of the other employers, so to the extent you
2 can answer his question without revealing
3 confidential information, you know, you should feel
4 free to do so. But otherwise, I suspect you
5 probably had a confidentiality agreement with
6 Boston Scientific --
7 THE WITNESS: Sure.
8 MR. BONELLA: -- that you may be bound. I
9 just don't know the facts. You may or may not --
10 whether it's public or not, but to the extent you
11 can answer his question generally without revealing
12 any confidential information --
13 THE WITNESS: I think I can answer it
14 generally.
15 Q. I'm not trying to get into confidential --
16 at least by these generalized questions. That's
17 why I tried to ask the question in a pretty general
18 way. We'll see if I need to ask anything more
19 specific but --
20 A. All right. I think -- I believe that the
21 pending patents' applications are not in the field
22 of sutures. They are in the field of my most
23 recent --
24 Q. Can you tell me generally what field
25 they're in?

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1 A. Medical. Stents -- stent and drug
2 delivery technology.
3 Q. Do any of those -- do you have patents on
4 stents as well?
5 A. No patents issued on stents.
6 Q. Okay. Going back then to the ones that
7 are -- the pending applications, do any of them
8 involve coating issues?
9 MR. BONELLA: Object to the form.
10 A. That actually is getting close to the
11 confidential side of -- I mean, I can say
12 generically, yes, they are involved with coatings
13 on stents.
14 Q. Uh-huh. How many pending applications are
15 there?
16 A. I'm aware of at least two.
17 Q. Do either of these pending applications
18 have to do with fibers?
19 A. No.
20 Q. Do any of these applications have to do
21 with braiding?
22 A. No.
23 Q. Going back to the existing patents -- the
24 nine to ten -- do any of those have to do with
25 braiding technology in any way, other than the --

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1 the 446 patent we're speaking about here today?
2 A. No, I do not believe so.
3 Q. Let's go back to your -- your work
4 history. We were -- I believe you told me you were
5 at Ethicon starting February 29th, 1988, and you
6 were in suture research. And how long were you in
7 that position?
8 A. For the vast majority of the four years I
9 was at Ethicon, I was in the suture research area.
10 Q. So, it was 1988 to 19 --
11 A. '92.
12 Q. -- 92. Did all of that work have to do
13 with braided sutures?
14 A. Most of the work had to do with braided
15 sutures.
16 Q. And what position did you have during that
17 period of time?
18 A. I was senior scientist, and then I was
19 promoted to section manager.
20 Q. Of what section?
21 A. It was just section manager, suture
22 research.
23 Q. And when you were a section manager, what
24 -- what suture research were you managing?
25 A. Right. It was primarily braided sutures,

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1 oh, why did you leave Mitek to go to Boston
2 Scientific?

3 A. I was recruited by someone that I had
4 worked with in the past, and I was interested in
5 the drug-eluting technology.

6 Q. And where is — but where were you working
7 when you were at Boston Scientific?

8 A. Natick, Massachusetts.

9 Q. Where we are now?

10 A. Yeah. It's a stone's throw away.

11 Q. And I think you told me you recently
12 switched jobs?

13 A. Yes.

14 Q. Who are you working for now?

15 A. I am with a start-up company named
16 Cappella, C-a-p-p-e-l-l-a, and I'm the vice
17 president of research & development.

18 Q. And why did you switch from Boston
19 Scientific to Cappella?

20 A. Desire to go to a small company and
21 additional responsibility.

22 Q. And what field are they in?

23 A. They are in drug-eluting stents for
24 bifurcation disease.

25 Q. So, it's a somewhat similar field to

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1 answer.

2 MR. SABER: Well, I think I'm entitled to
3 an answer whether he reviewed all the documents.
4 When it gets into the specifics of it —

5 MR. BONELLA: Sure.

6 MR. SABER: — I may disagree with you,
7 but that's a different question.

8 MR. BONELLA: So, did you review other
9 documents? Why don't we answer that question yes
10 or no for now. The question is, did you review
11 other documents? Just answer that yes or no.

12 A. Yes.

13 Q. Other than any preparation you did
14 together with counsel, did you review any documents
15 other than the Hunter patent?

16 A. No. No.

17 Q. Excuse me?

18 A. No.

19 Q. But there were documents that you reviewed
20 with counsel.

21 A. Yes.

22 Q. And when did that occur?

23 A. That occurred yesterday and briefly last
24 fall.

25 Q. Were those, as best as you recall, the

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1 where —

2 A. It's very similar to.

3 Q. — to where Boston Scientific was.

4 A. Yeah.

5 Q. And when did you start with Cappella
6 exactly?

7 A. The -- January 9th.

8 Q. Okay. What did you do to prepare for your
9 deposition today?

10 A. I reviewed the Hunter patent.

11 Q. Anything else?

12 A. No.

13 Q. Did you review any other documents —

14 MR. BONELLA: Anything that we reviewed
15 together or things that I showed you, he's not
16 entitled to know.

17 THE WITNESS: Right.

18 MR. BONELLA: That's attorney/client
19 privileged work product, so you're not entitled to
20 that. If you reviewed other documents, other
21 things that I showed you, you should answer that,
22 but to the extent or things I showed you we
23 discussed, that's privileged, and he's not entitled
24 to know that, so I'm instructing you not to answer
25 to that extent, but outside of that, you can

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1 same documents that you reviewed on those two
2 occasions or were they different documents?

3 A. Same documents.

4 Q. Did you review with counsel lab notebook
5 material?

6 MR. BONELLA: I'll object and instruct you
7 not to answer that question.

8 Q. Will you follow your counsel's advice?

9 A. Yes.

10 Q. Can you describe to me generally the kinds
11 of documents that you reviewed?

12 MR. BONELLA: I object and instruct you
13 not to answer that question.

14 A. I accept my counsel's advice.

15 Q. Okay. How long did you meet with — you
16 met with counsel yesterday in preparation for this
17 deposition.

18 A. Yes.

19 Q. And how long did you meet, approximately?

20 A. Four hours.

21 Q. For purposes of this deposition, have you
22 met with counsel any time other than yesterday?

23 A. No.

24 Q. Did you have — have you spoken with
25 counsel over the phone in preparation of this — in

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1 preparation for this deposition?
2 A. Only to arrange a meeting time.
3 Q. Nothing substantive.
4 A. Just logistics, right.
5 Q. Nothing substantive. Other than for
6 purposes of preparing for this deposition, have you
7 – have you done anything – have you had any role
8 at all with respect to your work that led to the
9 Hunter patent or anything else involving this
10 litigation?
11 MR. BONELLA: Object to the form of the
12 question.
13 Q. Let me rephrase that question. Have you
14 – have you been contacted – have you met with
15 counsel for any other purpose in connection with
16 this litigation –
17 MR. BONELLA: Object to the form.
18 A. I –
19 Q. – other than to prepare for today?
20 A. Right. No. Again, we met briefly last
21 year, just met with counsel –
22 MR. BONELLA: I instruct you not to answer
23 to – don't disclose any communications that we
24 had, any substance of our discussion. You tell him
25 who, what, when, where, but not what we discussed.

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1 A. Sure. It was just that --
2 Q. Yeah. I was trying to ask a general
3 question to just follow up. You've met with
4 counsel previously in, say, the last year?
5 A. Yes.
6 Q. Okay. How many times in the last -- let's
7 say the last two years -- have you met with J&J's
8 counsel other than yesterday?
9 A. Once.
10 Q. Okay. When was that meeting?
11 A. That was a meeting that I referred to last
12 fall.
13 Q. In a general sense, what was the purpose
14 of that meeting?
15 MR. BONELLA: Object to the form.
16 Q. And again, I'm not asking you to disclose
17 what you actually discussed at that meeting.
18 MR. BONELLA: Instruct you not to answer
19 to the extent -- I mean, he's not entitled to know
20 why we met.
21 A. I accept my counsel's --
22 MR. SABER: I think I am --
23 MR. BONELLA: Well, it depends how he's
24 going to answer.
25 MR. SABER: Yeah. I know. That's why I'm

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1 trying to say -- I'm just trying to get the same
2 answer I would get if this were a document on the
3 privilege log. That's all I'm trying to do so I
4 understand the general subject matter of the
5 meeting.
6 MR. BONELLA: If you want to take a break,
7 I will talk with him so he can answer it the way
8 you want to answer it, but I don't want him to
9 answer the way he --
10 MR. SABER: Let me just try.
11 MR. BONELLA: If you want to take a break,
12 I'll tell him, you know, where the contours are.
13 MR. SABER: Let me just try and see if you
14 may need a consultation.
15 Q. Can you tell me the general subject matter
16 of the meeting with -- that you had with counsel?
17 And I'm not trying to get the specific
18 communications.
19 MR. BONELLA: And I want to take a break
20 and consult the witness.
21 MR. SABER: Go ahead. You can.
22 (Recess was taken.)
23 (Question read back.)
24 A. Michael described to me that there was a
25 case on the Hunter patent. That was the general

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1 purpose.
2 Q. Well, why was he meeting with you?
3 A. Oh, as --
4 MR. BONELLA: Object to the form.
5 Q. Do you have an understanding why?
6 MR. BONELLA: If you want to know the
7 general subject matter of the meeting --
8 MR. SABER: Yeah.
9 MR. BONELLA: -- that's different than
10 what you're asking. You're asking why. That's
11 implying that you are -- that a legal theory --
12 Q. What was the general subject matter that
13 you and Mr. Bonella discussed?
14 MR. BONELLA: Okay. You can answer that
15 generally -- general subject matter, but nothing
16 specific about communications, what we looked at,
17 any documents we looked at, any communications that
18 we had, just the center subject matter.
19 A. The general subject matter was this
20 pending case between Arthrex and Johnson & Johnson.
21 Q. Okay.
22 A. And regarding a patent that I was an
23 inventor on.
24 Q. Did the general subject matter involve
25 your work that you had done that led to the patent?

12 (Pages 42 to 45)

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1 MR. BONELLA: He said it was excerpts.
2 Now you just said it was his notebook. I'm not
3 sure all the pages are here.
4 MR. SABER: All I can tell you is this is
5 what was produced to us.
6 THE WITNESS: I see.
7 MR. SABER: There was another document
8 that was produced to us which were just selected
9 pages from this, but that's not this.
10 A. I see.
11 Q. What I gave you was what was produced to
12 us.
13 MR. BONELLA: I just don't know if it's
14 the whole thing or just selected pages that was
15 relevant.
16 Q. You testified earlier about names for
17 projects.
18 A. Correct.
19 Q. Did you have a name for this project that
20 resulted -- of the work that led to the 446 patent?
21 A. I don't believe that that would have
22 fallen under a single name.
23 Q. Okay.
24 A. But some of the names would have been STS
25 and CBE -- CBE, composite braid evaluation. Yeah,

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1 demonstrate feasibility of the concept.
2 Q. Well, what does the STS stand for? What
3 does STS stand for?
4 A. I wish I -- I do not recall.
5 Q. What?
6 A. I do not recall.
7 Q. Okay.
8 A. I was trying to remember that.
9 Q. The STS part of -- did you come up with
10 the name STS?
11 A. No.
12 Q. Who came up with that one?
13 A. STS was a program that existed when I had
14 joined.
15 Q. Do you know who came up with that?
16 A. No, it just predated me.
17 Q. What was the STS part of the project?
18 A. I believe that the initial work by Al
19 Hunter and Art Taylor with the PTFE composites were
20 part of this STS program.
21 Q. Okay.
22 A. And I believe, again, I believe it related
23 to some type of silk.
24 Q. Excuse me?
25 A. Some -- I believe it related to a

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1 I would say those are the two that come to mind.
2 Q. Okay.
3 A. Maybe one other would be -- no. I think
4 that -- I was trying to -- I thought there was a
5 program name for an improved silk suture.
6 Q. What was composite braid evaluation? Is
7 that a name that you gave?
8 A. Yes.
9 Q. And what did you use that name for?
10 A. I used that when I was reporting out my
11 work to management, because this was a technology
12 that we developed that -- that was initially
13 developed kind of outside of a particular project.
14 Q. Uh-huh. But if I understood your
15 testimony correctly, composite braid evaluation
16 doesn't cover all of the project that led to the
17 446 patent -- of your work, at least.
18 A. Right. Right.
19 Q. Does it -- does it refer to some part of
20 your work?
21 A. It does refer to part of the work, yes.
22 Q. Well, which part of the work does it refer
23 to?
24 A. It refers specifically to the -- the
25 evaluation of specific braid constructions that

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1 synthetic silklike material.
2 Q. Synthetic silk --
3 A. Yeah, silk.
4 Q. Okay.
5 A. In the sense of a suture that would -- may
6 be a next-generation product beyond silk.
7 Q. What were the -- what were -- was the STS
8 part a composite braid?
9 A. There was -- I believe there was a
10 component of the STS program that involved
11 composite braids.
12 Q. And what materials?
13 A. I believe that included PTFE and PET.
14 Q. Okay. Anything other than that?
15 MR. BONELLA: Are you talking about before
16 he started? I mean, your questions just aren't
17 clear at all as to what time frame you're talking
18 about.
19 Q. I'm not talking about any time frame.
20 MR. BONELLA: STS refers to the entire
21 program.
22 MR. SABER: There was a project. He's
23 telling me about the project.
24 MR. BONELLA: But he has it in his
25 notebook. Are you saying before --

35 (Pages 134 to 137)

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1 to see which ones were relevant, and we produced
2 the ones that -- things that were relevant and not
3 privileged.

4 MR. SABER: We don't need to take any
5 time, and it may be everything is there.

6 MR. BONELLA: I'm telling you we searched.
7 We did it.

8 MR. SABER: I understand, but he
9 identified a specific kind of document.

10 MR. BONELLA: We looked in those reports.

11 MR. SABER: Sometimes those things fall
12 through the cracks, and sometimes they don't.

13 MR. BONELLA: I know exactly what he's
14 talking about, and we looked. That's why I'm
15 telling you we pulled the stuff. We had a report
16 summary, said, Here's the reports from Doctor
17 Steckel from that time frame for Mr. Hunter, for
18 Mr. Taylor; we pulled the reports that were there,
19 we produced the ones that were relevant and things
20 that weren't privileged. So, I know that was
21 specifically done and looked for.

22 MR. SABER: Okay.

23 MR. BONELLA: So that's all I can tell
24 you. I'm just saying we did it.

25 MR. SABER: Again, I'm not trying to

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1 have already been plied together, so you would have
2 two dissimilar fibers twisted together into a yarn,
3 and then on each carrier, you would have more than
4 one fiber type.

5 Q. What is plying together?

6 A. Plying together is a textile term for a
7 twisting operation where you take one or -- well,
8 take more than one yarn, twist them together to
9 form a larger yarn.

10 Q. Which is -- and it's plied together
11 because it's twisted.

12 A. Plied. Yeah, is referring to the
13 twisting.

14 Q. Okay. So, then looking at the little
15 picture that's shown next to No. 2 there --

16 A. Yes.

17 Q. -- where it says, the "A, B," is that
18 representing the fact that A and B is twisted
19 together?

20 A. Correct. That's a yarn bundle, which is
21 made from A type yarn and B type yarn twisted
22 together.

23 Q. Right. And the A -- B would be from above
24 PET/PTFE or PET/PP, or I guess could be -- let's
25 talk about the --

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1 question your bona fideness. If it's done, it's
2 done.

3 A. These are paper copies. I mean, you know,
4 these were probably hand typed. So, it was one
5 copy in a file somewhere -- if it still exists.

6 Q. Am I correct that the only combinations
7 that are reported here are PET and PTFE, PET and
8 PP, and then an absorbable, PVS, and vicryl?

9 MR. BONELLA: Object to the form.

10 A. We're referring to the 6688 pages?

11 Q. Yes, sir.

12 A. That is correct.

13 Q. Four types of braiding have been
14 discussed, am I correct?

15 A. Correct.

16 Q. The first one is carrier braiding. Could
17 you explain what carrier braiding is.

18 A. When you would have a dissimilar fiber or
19 yarn on separate carriers of the braid.

20 Q. And would -- on each carrier, would the
21 yarn be homogenous?

22 A. Yes, there would be only one type of fiber
23 on each carrier.

24 Q. And what is yarn blending?

25 A. Yarn blending is when the individual yarns

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1 A. Right, those are the --

2 Q. -- nonabsorbables.

3 A. -- examples we used, yes.

4 Q. At this time were you working with any
5 other materials other than the ones referenced on
6 this page --

7 MR. BONELLA: Object to form.

8 Q. -- for this project?

9 A. On this particular project?

10 Q. Yes, sir.

11 A. Well, we were looking at a variety of
12 materials. These are the ones we believed were
13 representative of the invention at the time.

14 Q. Right.

15 A. An example -- the most -- the most -- that
16 were exemplary of the invention but not exclusive.

17 Q. Did you -- at this point did you try to
18 build any other combinations of materials other
19 than PET/PP or PET/PTFE, and I'm talking about --
20 for purposes of this one -- let's talk about the
21 nonabsorbables.

22 A. Right. At this stage we auditioned others
23 but did not try to produce prototypes of any.

24 Q. At any point in the stage of this project,
25 did you try to build anything other than either

41 (Pages 158 to 161)

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1 would be an acceptable suture?

2 MR. BONELLA: Objection. Asked and
3 answered.

4 A. We had a belief that it could lead to --
5 as you're saying -- an acceptable suture. There
6 were other issues that we didn't know. For
7 example, how the -- how polyethylene behaved in the
8 body. So, it was a high priority. Polyethylene,
9 even though there was an interest, it wasn't a --
10 it wasn't something that was a high priority at the
11 time.

12 Q. The thought didn't cross your mind that,
13 Oh, this would make an unacceptable suture to put
14 Dyneema together with PET?

15 A. My recollection was -- an unacceptable
16 suture or an acceptable?

17 Q. An unacceptable suture.

18 A. Well, the concern with any of the very
19 high-strength fibers was always knot strength, and
20 that was true whether it was Dyneema, Spectra,
21 Kevlar, etcetera. So, the general view was, I
22 mean, all of those -- 100 percent, all of those,
23 Ethicon evaluated at one point as a suture
24 material. They're the world's biggest suture
25 material company. And all of them there was an

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1 answered.

2 A. I don't know if it was good or bad. You
3 know, it was --

4 Q. You thought it was a good idea?

5 A. We thought we could have improved knot
6 strength, and we could get the beneficial
7 properties of both in a blend. That's what we
8 thought.

9 Q. Okay. Is there any documentation of using
10 Dyneema or Spectra, blending it together with
11 another component -- another -- a yarn -- is there
12 any documentation that exists that you know of?

13 A. I haven't -- I haven't seen any. I am not
14 aware of any.

15 Q. Do you know whether that was in your idea
16 memo?

17 A. I do not know. I have not seen my idea
18 memo.

19 MR. BONELLA: He said he doesn't know if
20 he did.

21 THE WITNESS: I'm sorry.

22 MR. SABER: Actually, he did. He
23 testified he does remember doing it, but that's
24 okay.

25 Q. Could you look at the Claim 1 of the 446

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1 interest in how do you improve the knot strength of
2 them, and can you -- that was -- that was something
3 we discussed.

4 Q. I'm not sure I understand your answer.

5 A. Go ahead.

6 Q. And I'm trying to --

7 A. Sure.

8 Q. When you had this idea that you could
9 blend Dyneema together with PET, were you -- did
10 you believe it would make an acceptable suture or
11 an unacceptable suture?

12 A. No. We believed -- we believed that that
13 could offer a suture with straight tensile that was
14 better than Ethibond, and you know, could
15 potentially solve the knot issues, and again, that
16 was a generic view for all of the high-tensile
17 fibers.

18 Q. You thought it was a good idea --

19 A. Yes. Yes.

20 Q. -- rather than a bad idea?

21 A. No, we viewed -- we viewed that as a
22 potential good idea.

23 Q. And you didn't think, Oh, that's a bad
24 idea.

25 MR. BONELLA: Objection. Asked and

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1 patent, please. And I want to talk about Group A
2 and the Group B.

3 A. Okay.

4 Q. Other than PET and PP or PET and PTFE, is
5 there any documentation that you know of that
6 exists of any other combination of one yarn from
7 the first group and one yarn from the second group?

8 MR. BONELLA: Object to the form of the
9 question.

10 A. The only documentation that I can speak
11 with any confidence is -- is this. I mean, it's
12 just been too long.

13 Q. I'm just asking you to do the best you
14 can.

15 A. Yeah, of course. So, I mean, I can't
16 speak with any confidence that there's
17 documentation that shows any other combination.

18 Q. Do you --

19 A. My recollection was --

20 Q. Go ahead.

21 A. -- to show the concept we focused on PET
22 and PTFE, and PET and polypropylene. We thought
23 that it would demonstrate the concept. Some of
24 these materials, as you may know, are not readily
25 available in the form that we would need. You

49 (Pages 190 to 193)

1 UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF MASSACHUSETTS
3 C.A. NO. 04-12457 PBS
4 DAY II

**TRAVEL
TRANSCRIPT**

5 DePUY MITEK, INC.,)
6 Plaintiffs,)
7 vs.)
8 ARTHREX, INC., a Delaware)
9 corporation,)
10 Defendants.)

11
12 CONTINUED DEPOSITION of DR. MARK
13 G. STECKEL, called as a witness by and on behalf of
14 the Defendant, pursuant to the applicable
15 provisions of the Federal Rules of Civil Procedure,
16 before P. Jodi Ohnemus, Notary Public, Certified
17 Shorthand Reporter, Certified Realtime Reporter,
18 and Registered Merit Reporter, within and for the
19 Commonwealth of Massachusetts, at the Hilton Hotel,
20 25 Allied Drive, Dedham, Massachusetts, on Friday,
21 3 February, 2006, commencing at 9:06 a.m.
22
23
24
25

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1 A. If I could ask for a clarification.

2 **Q. Sure. Of course.**

3 A. Is that question -- are you asking any --
4 any of the subject matter discussed?

5 **Q. Well, let me ask particularly about the**
6 **first paragraph, the issues of conception and**
7 **reduction to practice of the invention.**

8 MR. BONELLA: You can answer yes, no, or
9 you don't remember.

10 **Q. That's all I'm asking for.**

11 A. The answer is yes.

12 **Q. Okay. Do you see where it says in the**
13 **first sentence that the invention was reduced to**
14 **practice at least as early as February 2, 1989 at**
15 **Ethicon, Inc.?**

16 A. Yes.

17 **Q. Do you agree with that?**

18 MR. BONELLA: Object to the form.

19 A. I agree to that based on my review of my
20 -- my notebook.

21 **Q. Do you know of any evidence of whether**
22 **there was a reduction to practice of the invention**
23 **earlier than February 2, 1989?**

24 A. We had actually produced some braids in
25 the June time frame of 1988. The full

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1 A. I do have recollection of building braid
2 and doing our basic suture testing. The full
3 characterization in terms of some of the more
4 unusual properties took longer.

5 **Q. What -- what do you mean by basic**
6 **characterization versus?**

7 A. Basic characterization, whenever we made
8 braids, we would test straight tensile, knot
9 tensile, diameter.

10 **Q. Okay.**

11 A. That was the first thing we always did.

12 **Q. So, your recollection is you might have**
13 **done that prior to February 2, 1989, the --**

14 A. Yes.

15 **Q. -- tensile knot strength and diameter?**

16 A. Correct. That was very quick and
17 outstanding procedure for us.

18 **Q. What did you mean when you said the more**
19 **full investigation?**

20 A. More full -- we were interested in
21 characterizing this suture pliability, and the
22 methodology for that was still evolving at that
23 time.

24 **Q. And do you recall doing that more full**
25 **investigation prior to February 2, '89?**

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1 characterization didn't occur until the following
2 year.

3 **Q. And what do you mean by "full**
4 **characterization"?**

5 A. The testing to determine its performance
6 relative to our sutures.

7 **Q. Okay. Using then that as a -- as a**
8 **description, do you know of any evidence of where**
9 **you built a braid and tested its performance as you**
10 **just described prior to February 2, 1989?**

11 A. Can I review my -- my notebook?

12 **Q. Well, if you can answer yes or no. I'm**
13 **not trying -- I want to try and get you out of here**
14 **as best we can.**

15 A. Sure.

16 **Q. But I mean, to the extent you can answer**
17 **the question --**

18 A. Well, to the extent I can answer the
19 question, it would be -- I can't remember.

20 **Q. Okay. As you sit here today, based upon**
21 **review that you've done, do you have any**
22 **recollection of a reduction to -- of a -- where you**
23 **built a braid and tested it as you described prior**
24 **to February 2, '89?**

25 MR. BONELLA: Object to form.

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1 A. I don't remember completing that before
2 February '89.

3 **Q. Okay. Could you take a look again at**
4 **Defendant's Exhibit 75, which was marked at your**
5 **previous deposition, and I'd like to draw your**
6 **attention to the entry for February 2, '89, which**
7 **starts on Page 2635. That's the Bates number.**

8 A. 2635.

9 **Q. It's about --**

10 A. Yeah, I've got it.

11 **Q. Somewhere in the middle.**

12 A. Got it.

13 **Q. And that is an entry that goes on for four**
14 **pages. Is this an entry that shows the more full**
15 **investigation that you just described?**

16 A. Yeah, this is actually beyond that. This
17 is actually taking our original June constructions
18 and expanding those in the area -- one particular
19 area of PET, PTFE.

20 **Q. And expanding in what way?**

21 A. Attempting to look at multiple
22 configurations and a set of controls --
23 nonheterogeneous controls.

24 **Q. And then to do what?**

25 A. And then to further the development

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1 process and optimize the construction.
2 **Q. Did this involve testing characteristics**
3 **beyond the basic ones that you -- you told me about**
4 **of diameter, tensile strength, and knot strength**
5 **for the heterogeneous braids?**

6 A. Uh-huh. Yes.

7 **Q. And is that on the bottom of -- is that**
8 **reported -- those results reported on the bottom of**
9 **Page 2637 under "composite braid evaluation,**
10 **physical property characterization"?**

11 A. Yes.

12 **Q. Let me just ask you, if I could, the -- am**
13 **I correct that the -- the heterogeneous braids that**
14 **are discussed in this report are a combination of**
15 **PET and PTFE?**

16 A. Yes.

17 **Q. And there are no other ones -- no other**
18 **composite braids that are discussed other than PET**
19 **and PTFE, is that correct?**

20 MR. BONELLA: Object to form.

21 A. Not in this series.

22 **Q. That's -- that's right. And could you**
23 **describe to me, in a general sense, how the braids**
24 **were constructed. And I'm talking specifically**
25 **about the heterogeneous braids.**

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1 A. The braids consisted of three
2 configurations, a carrier blend, a yarn blend, and
3 a commingled fiber with two -- two versions of the
4 yarn blend.

5 **Q. And that's what we discussed the last time**
6 **about carrier blending, yarn blending, commingle --**

7 A. Same terminology, yes.

8 **Q. Same things we talked about. So, they**
9 **were -- they were braided in three different ways.**

10 A. Yes.

11 **Q. And they were braided in the manner in**
12 **which you described in your last deposition for the**
13 **three types of braiding?**

14 A. Yes.

15 **Q. What was done next after the braid? Was**
16 **anything else done after the braid?**

17 A. Conventional -- yes, conventional braid
18 technology is, post braiding you go through a --
19 some type of hot stretch treatment, and these were
20 -- these were processed by hot stretch.

21 **Q. What is the purpose of a hot stretch?**

22 A. Purpose of the hot stretch is primarily to
23 condense the braid into the smallest diameter
24 uniform bundle possible.

25 **Q. And why are braids hot stretched?**

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1 A. In my opinion, braids are hot stretched to
2 maximize mechanical strength and to minimize braid
3 roughness.

4 **Q. And is that a step that you felt was**
5 **appropriate for all of the composite braids that**
6 **you were working with, the hot stretching step?**

7 A. That was -- that was a step that was
8 appropriate for essentially any braided suture that
9 I was aware of at the time.

10 **Q. Okay. Was there anything else done to**
11 **process the braids after the hot stretching?**

12 A. Routinely we would go through a cleaning
13 or a scouring operation and these were scoured.

14 **Q. Anything else? What is scouring?**

15 A. Scouring is -- is a washing in a
16 water-based detergent to remove any of the machine
17 oils from processing.

18 **Q. Any other steps taken to the braids?**

19 A. Not -- not in this series.

20 **Q. Were there braids annealed?**

21 A. I have no recollection, and it's --
22 there's no mention of it in my notebook.

23 **Q. Okay. Were they -- were the braids**
24 **coated?**

25 A. Not in this series.

Page 225

1 **Q. Were the braids -- was a tipping put on**
2 **the braids?**

3 A. There would not be tipping, since we never
4 intended to attach needles to this evaluation.

5 **Q. Were the braids sterilized?**

6 A. Typically at this level -- the answer is,
7 I believe, no. At this point in an evaluation, we
8 would typically evaluate presterile properties.

9 **Q. Okay. Could you turn to Page 2638. So,**
10 **the fourth page of the --**

11 A. Yes.

12 **Q. -- fourth page of this -- the entry.**
13 **Under "Discussion," the first sentence says, "From**
14 **a braid processing viewpoint, the commingled yarn**
15 **was the least problematic braid, followed by the**
16 **yarn blend. The carrier blend presented the most**
17 **difficulties in core popping and braid looseness."**

18 **What did you mean by "The carrier blends**
19 **presented the most difficulties in core popping and**
20 **braid looseness"?**

21 A. Core popping is a common braid defect.
22 You know, any braid text would -- would cover it.
23 The ability to adjust the tension on the yarn that
24 affects core popping was more difficult with the
25 carrier blend and the yarn blend than the

5 (Pages 222 to 225)

Page 226

1 commingled.

2 **Q. What causes -- I think you mentioned core**
3 **pop or core popping briefly at the last deposition.**
4 **What causes core popping?**

5 MR. BONELLA: Object to form.

6 A. Typically, it is a mismatch in tension
7 between your yarns and the braiding machine.

8 **Q. And did the -- the yarns produced by the**
9 **carrier blend exhibit this problem of core popping?**

10 A. From my notebook, it appears they did.

11 **Q. All right. What is braid looseness?**

12 A. Braid looseness is the individual yarns
13 within the braid are not packed tightly within the
14 diameter and hence have an undesirable softness and
15 roughness.

16 **Q. And what causes this looseness?**

17 A. Variety of factors in the braiding
18 process, including tension, yarn -- yarn diameter,
19 braiding speed, number of picks per inch.

20 **Q. Now, the braids that you were evaluating**
21 **on February 2nd, 1989, were these additional braids**
22 **from the ones that you had -- at least initially --**
23 **evaluated back in June of '88?**

24 A. Yes.

25 **Q. Do you know whether the ones that you**

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1 **Q. What do you mean when you say adequate to**
2 **evaluate the technology?**

3 A. I mean that an infrequent core pop over
4 some length of braid would not prevent us from
5 evaluating the technology.

6 **Q. What do you mean -- what do you mean when**
7 **you say, "evaluating the technology"?**

8 A. Assessing its performance per the standard
9 and nonstandard suture properties.

10 **Q. Performance for what purpose?**

11 A. Performance meaning mechanical strength,
12 handle, pliability, etcetera.

13 **Q. Is there any reason you know that the core**
14 **popping was infrequent that you used in your answer**
15 **-- your previous answer?**

16 A. That -- that is my recollection.

17 **Q. You recall that there was infrequent --**

18 A. Yes.

19 **Q. Does this document say it's infrequent?**

20 A. It does not, and I wouldn't -- you know.

21 MR. BONELLA: Big document.

22 **Q. Well, I'm talking about the -- the -- just**
23 **to be more specific, I'm talking about the November**
24 **-- excuse me -- the February 2nd entries.**

25 MR. BONELLA: The page -- February 2nd

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1 **evaluated in June of '88 had a core popping and**
2 **looseness problems?**

3 A. Core popping is something we see on almost
4 every lot of braided suture to some extent. It
5 would be very likely that any -- any of the braids
6 from June 6th or February -- June 6th, '88 or
7 February 2nd, '89 had some level of core popping.
8 It's just a feature that has to be managed by
9 process conditions.

10 **Q. And at least by the February 2 time, am I**
11 **correct that you had not yet been able to manage**
12 **the core popping issue?**

13 MR. BONELLA: Object to form.

14 A. Yeah, I should say that both exercises
15 were showing proof of concept, and that core
16 popping is a manufacturing -- it's -- it's a --
17 it's an issue that would typically be handled later
18 in the process during -- during manufacturing,
19 development.

20 **Q. My question, sir, was as of February 2nd,**
21 **1989, had you been able to handle the core popping**
22 **problem?**

23 MR. BONELLA: Object to form.

24 A. Yes, adequately to evaluate the
25 technology.

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1 entry, does it say infrequent?

2 MR. SABER: Yes, sir.

3 A. (Witness reviews document.)

4 **Q. The four pages that we were discussing?**

5 A. Yeah. Yeah. I was going back to the
6 discussion which was -- oh, yeah. (Witness reviews
7 document.) I believe it's inferred in that first
8 paragraph in the discussion.

9 **Q. And that's where your basis of your**
10 **statement that the core popping was infrequent?**
11 **Specifically I'm asking about the carrier blend.**

12 A. Yes, for -- yes, just from -- just from my
13 language that I used here in terms of if -- if it
14 -- if the core popping or looseness was
15 significant, meaning very frequent, it would have
16 been my practice to -- to spell that out clearly.

17 **Q. Okay.**

18 A. And the intent here was just, you know,
19 the -- there was more work that would be required
20 for validation.

21 **Q. Could these braids have been sold as**
22 **sutures, sir?**

23 A. If you -- yes. If you -- your yield would
24 have been lower than -- than preferred -- than
25 optimal.

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1 **Q. Even with the core popping problem?**

2 MR. BONELLA: Object to form.

3 **Q. Is that your testimony?**

4 A. That is my testimony.

5 **Q. Okay. How could you sell the suture? How**
6 **could these be -- sutures be saleable with the core**
7 **popping problem?**

8 MR. BONELLA: Object to form.

9 A. I believe if you looked at Ethicon's
10 current production of braided sutures, you would
11 find every braided suture has core popping, and
12 that it's quality controlled -- through quality
13 control, sections that have core popping are
14 removed. But that is a defect that every -- every
15 marketed suture braid possesses.

16 **Q. And your testimony is that the core**
17 **popping is only infrequent is just your**
18 **understanding from this first paragraph, is that**
19 **correct?**

20 MR. BONELLA: Object to form. Asked and
21 answered. Mischaracterizes testimony.

22 A. Yes, and again, if the core popping was
23 significant, it would prevent -- it would prevent
24 -- it would have prevented further
25 characterization.

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1 **Q. I'm talking about significant to be able**
2 **to sell the suture, as opposed to evaluating the**
3 **performance. Do you understand that?**

4 A. I believe I understand that. And again,
5 my answer would be to sell the suture would require
6 a quality control step where core pops would be
7 removed, which is common practice.

8 **Q. Okay. Do you see in the -- did you ever**
9 **produce -- in the work that you did -- composite**
10 **fibers that didn't have a core popping problem?**

11 A. I guess you would have to clarify
12 "problem," because, again, core popping's
13 everywhere.

14 **Q. Where you didn't have to comment about the**
15 **core popping.**

16 MR. BONELLA: This is from his
17 recollection?

18 MR. SABER: Yes, sir.

19 MR. BONELLA: Because there is a document
20 in front of him. This is just without -- no
21 refreshing his memory.

22 MR. SABER: That's correct.

23 MR. BONELLA: I just want the record to be
24 clear.

25 MR. SABER: That's correct.

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1 A. From my recollection, the commingled
2 fibers rarely had a core popping.

3 **Q. How about the carrier blends?**

4 A. Again, we're within the definition of what
5 frequency is. Is it -- is it for manufacturing?
6 Is it for evaluation of concept?

7 **Q. Let's say for manufacturing.**

8 A. For manufacturing. And the question would
9 be?

10 **Q. Did you ever produce -- by carrier**
11 **blend -- sutures that wouldn't have a problem from**
12 **a manufacturing -- excuse me. Did you ever produce**
13 **-- let me strike that. With respect to the carrier**
14 **blends, did you ever produce a heterogeneous braid**
15 **that didn't have a core popping issue with respect**
16 **to manufacturing the braids --**

17 MR. BONELLA: Object to form.

18 **Q. -- that you can recall?**

19 A. Yeah. That's a very difficult question
20 for me to answer, because I really didn't have
21 manufacturing responsibilities. This was really
22 research and development. So, I -- I just find
23 that a difficult question to answer.

24 **Q. Let's go back, if we could, to Bates Page**
25 **2625.**

Page 233

1 A. 2625.

2 **Q. Yeah, which is a November 11, '88.**

3 A. 2625?

4 **Q. Yes, sir. It's a 11/11/88 entry.**

5 A. Very good.

6 **Q. Near the bottom paragraph you see it says,**
7 **"The PET/PTFE samples (CBE-01 to 05) had a range of**
8 **processing problems such as core popping and**
9 **looseness." Do you see that?**

10 A. Yes.

11 **Q. CBE-01 to 05, what is that referring to?**

12 A. That is referring to the table above the
13 core braid evaluation constructions, 1, 2, 3, 4,
14 and 5.

15 **Q. And what braiding was used for those? And**
16 **if you need -- you may need to go back to 2618 --**

17 A. I think so.

18 **Q. -- for that.**

19 A. (Witness reviews document.) From -- from
20 my notebooks, the 01 is a carrier blend; the 02 is
21 a yarn blend; the 03 is a commingled fiber.

22 **Q. And then 4 and 5 are just controls, so**
23 **they're not the blend?**

24 A. They're nonheterogeneous. They're
25 homogeneous.

7 (Pages 230 to 233)

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1 Q. Going back to Page 2625, you said they had
2 a range of processing problems such as core popping
3 and looseness. Is core popping and looseness the
4 same thing that we talked about with respect to the
5 February 2, '89 entry?

6 A. Yes.

7 Q. Were there any other processing problems?
8 It says, "A range of processing problems." What is
9 that referring to?

10 A. Core popping and looseness are the -- the
11 only two properties that I can recall being an
12 issue.

13 Q. Okay.

14 A. I think that's my figure of speech.

15 Q. Could you turn to an entry on December 13,
16 '89, which begins on Bates No. 2665, and then goes
17 on for, I guess, three pages.

18 A. Yes, 2665, December 13th, '89.

19 Q. Do you see at the top there it says, "PT
20 --" near the top: "PTFE/PET carrier blends have
21 been found to offer exceptional handling properties
22 for braided suture"?

23 A. Yes.

24 Q. Okay. What did you mean by "exceptional
25 handling properties" for a braided suture?

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1 tie-down even without a coating compared to silk
2 and Ethibond?

3 A. Typically, we would -- we would evaluate
4 the knot tie-down properties of experimental braids
5 by having a technician who was specifically trained
6 in this test method to do a simulated suture tie
7 involving multiple throws, and make a qualitative
8 assessment on some scale in terms of its relative
9 smoothness and force required for the tying
10 operation.

11 Q. Are the results of that test reported in
12 -- in your lab notebook?

13 A. I don't know.

14 Q. But is it your best recollection that
15 that's the kind of test that you're referring to by
16 the sentence that the, "Composite also ranked
17 better than the silk and Ethibond in knot tie-down
18 even without a coating"?

19 A. Yes.

20 Q. Is it pretty typical to do that kind of
21 test we just described?

22 A. Yes.

23 Q. To test knot tie-down?

24 A. Yes. Yes.

25 Q. It was surprising that the composite

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1 A. Could I refresh my memory on this?

2 Q. Sure. Please do.

3 A. (Witness reviews document.) I believe I
4 was referring to the improved pliability relative
5 to existing commercial non-absorbable braids.

6 Q. Were you referring to anything other than
7 pliability?

8 A. I -- I don't see any -- any reference to
9 anything other than pliability.

10 Q. The -- could you look at the next page,
11 2666?

12 A. 2666, yes.

13 Q. And there's a discussion of properties.
14 The last sentence there, "The composite braids also
15 ranked better than the silk and Ethibond and knot
16 tie-down, even without a coating." Do you see that
17 sentence?

18 A. Oh. Yes, of course.

19 Q. What is -- what were you referring to when
20 you said that, "the composite ranked better in knot
21 tie-down, even without a coating"?

22 A. Knot tie-down -- is the question what is
23 knot tie-down?

24 Q. Well, what were you referring to when you
25 said that the composite braid ranked better in knot

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1 ranked better than silk and Ethibond in knot
2 tie-down even without a coating?

3 A. I believe that was a surprising find.

4 Q. And is that part of the basis what became
5 -- of what became the invention in 446?

6 MR. BONELLA: Object to form.

7 A. Is that part of the basis?

8 Q. That -- yeah. Let me -- let me rephrase
9 that question. Was this part of the improvement
10 that you were referring to in the 446 patent --

11 MR. BONELLA: Object.

12 Q. -- of your suture?

13 MR. BONELLA: Object to form.

14 A. (Witness reviews document.) That was not
15 the intention.

16 Q. Was better tie-down part of the handling
17 improvement that you're referring to in the
18 December 13, '89 entry in your lab notebook?

19 A. I view knot tie-down -- when you -- I view
20 tie-down as a separate property from handling. So,
21 when I said, "exceptional handling," I was
22 referring to pliability and -- and the qualitative
23 features of hand, but the three knot tie-down
24 properties are subtly different.

25 Q. They're?

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1 A. As it's stated, we're -- where one of the
2 composite braids that two sets of properties we're
3 trying to combine would be strength and lubricity.

4 **Q. And is this -- is this sentence referring**
5 **to the work that we've been talking about today on**
6 **the composite braid project?**

7 A. Yes, in part.

8 **Q. I don't quite understand that. I'm**
9 **talking -- focusing just on that first sentence.**
10 **What did you mean when you said, "Yes, in part"?**

11 A. Yes. That the constructions that we had
12 looked at, some of those were this particular
13 embodiment that included a high lubricity and a
14 high strength.

15 **Q. And which one was -- which fiber gave the**
16 **high lubricity? Well, strike that. What -- what**
17 **components were you talking about when you wrote**
18 **this sentence?**

19 A. Which components was I talking about?

20 **Q. Yes, sir.**

21 A. Which yarns.

22 **Q. Blending of two fiber components.**

23 A. Right. Clarification: Of the previous
24 constructions we discussed which component?

25 **Q. Well, I'm trying to find out what two**

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1 **components you were referring to in this -- in this**
2 **paragraph.**

3 A. Well, in the previous -- previous
4 discussion, the polyester provided the high
5 strength, and the PTFE provided lubricity.

6 **Q. Is that what you're referring to in this**
7 **-- in this paragraph?**

8 A. These aren't PTFEs. These are another
9 fiber system blend.

10 **Q. Well, is it -- that's what I'm trying to**
11 **figure out. Is this first paragraph -- the title**
12 **of the project says, "BCF-CBE."**

13 A. Right.

14 **Q. Is that referring to two different --**

15 MR. BONELLA: Object --

16 **Q. -- projects?**

17 MR. BONELLA: Object to form. Misstates
18 the document.

19 A. That is referring to the one embodiment of
20 the original description of the heterogeneous
21 braids being by component fiber, so that this was
22 one subset of that original idea.

23 **Q. The "by component fiber" being that fourth**
24 **thing that we talked about before?**

25 A. Exactly. Exactly.

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1 **Q. The copolymers?**

2 A. Exactly. Co-extrusion at the fiber level.

3 **Q. Right. But what's talked about here in**
4 **the background is -- is that talking about the**
5 **co-extrusion, or is that talking about the carrier**
6 **blends that we've been talking about?**

7 MR. BONELLA: Wait a second. Let me read
8 the question.

9 MR. SABER: Let me rephrase it.

10 MR. BONELLA: Okay.

11 **Q. The discussion in the background, is that**
12 **referring to the co -- copolymer extrusion that you**
13 **just described?**

14 MR. BONELLA: Object to form.

15 A. I'm sorry. Could you repeat the question.
16 (Question read back.)

17 A. I believe that the background is applying
18 to the broader case of carrier blends, yarn blends
19 by component, etcetera.

20 **Q. Oh. So, this is a more generalized**
21 **discussion that could apply to any of the four**
22 **methods that we talked about last week?**

23 A. Well, we -- we clearly did explore those
24 four, yes.

25 **Q. Okay.**

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1 A. We send one that has been -- one type that
2 has been explored is this combination of high
3 lubricity and high strength.

4 **Q. Right. And what were -- specifically were**
5 **you referring to when you said the one type of**
6 **composite braid which has been explored? Is that**
7 **referring to the PTFE/PET braids that we've**
8 **discussed today?**

9 MR. BONELLA: Object to form. Misstates
10 the document.

11 A. I don't know what I was thinking.

12 **Q. Okay.**

13 A. When I -- you know, what I was referring
14 back to back in March of 1990.

15 MR. SABER: Mark this with the next
16 exhibit number.

17 (DMI095020 marked Exhibit 78.)

18 **Q. Let me show you what's been marked as**
19 **Defendant's Exhibit 78 and ask you if you're**
20 **familiar with this.**

21 A. (Witness reviews document.) No.

22 **Q. You've never seen this document before?**

23 A. No recollection.

24 **Q. Okay. Are you familiar with the subject**
25 **matter of this document?**

Page 250

1 A. Yes.
2 **Q. And what is it -- what is that?**
3 A. Well, I'm familiar that this was the
4 feedback from the idea review board, the standard
5 form, and from the note on it, I assume the 27 --
6 Idea No. 2749 was the heterogeneous braid idea.
7 **Q. In fact, just on that point: Could you**
8 **take a quick look at Defendant's Exhibit 76 that**
9 **was previously marked, and see it says the same --**
10 A. Yes.
11 **Q. -- IM number? So you feel certain that**
12 **this is referring to --**
13 A. Yeah.
14 **Q. -- your project -- your idea memo?**
15 A. Yes.
16 **Q. Okay.**
17 A. And that Barbara Schwartz, who was my
18 manager at the time, was recommending it for the
19 IRB to pursue some type of IP on that idea.
20 **Q. Who is Barbara Schwartz?**
21 A. Barbara Schwartz was either manager or
22 director of suture research at the time and someone
23 that I reported up through.
24 **Q. Okay. Is this her note that's --**
25 A. It appears to be her note, yes.

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1 **Q. Could you read her note for the record,**
2 **please.**
3 A. Yes. "Being reviewed as potential new
4 product for Ethicon. May offer significant
5 advantages if technical problems of mixing of
6 materials with dissimilar stress/strain properties
7 can be overcome."
8 **Q. Okay. Do you have an understanding of**
9 **what was meant by "-- if technical problems of**
10 **mixing of materials with dissimilar stress/strain**
11 **properties can be overcome"?**
12 A. I believe she's referring to the tension
13 issues on processing the heterogeneous yarns.
14 **Q. That we've discussed last week and earlier**
15 **today?**
16 A. That would be my understanding.
17 **Q. All right. And is it your understanding**
18 **that those --**
19 A. Although this is Barbara's words, not
20 mine.
21 **Q. That's what I'm trying to under -- to get**
22 **your understanding.**
23 A. Yeah.
24 **Q. And is it your understanding that those**
25 **technical problems with tension had not yet been**

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1 **overcome as of February 8th, 1990?**
2 MR. BONELLA: Object to the form.
3 A. I don't know if -- if Barbara at the
4 director level or manager level would have had
5 firsthand knowledge of that, so --
6 THE WITNESS: I'm sorry. Could you repeat
7 the question.
8 (Question read back.)
9 A. Once again, I think we're in the realm of
10 manufacturing requirements versus proof of concept
11 requirements in terms of have the technical
12 problems been overcome?
13 **Q. Well, was it your understanding that --**
14 **well, do you understand -- do you know the basis of**
15 **Ms. Schwartz's comment, what that was based upon --**
16 **what her comment was based upon?**
17 A. No, I'm inferring it from -- from the
18 comments and from what we've read.
19 **Q. Okay. So, do you have an understanding**
20 **one way or another exactly what she was talking --**
21 **well, strike that.**
22 MR. SABER: Why don't we take our break.
23 (Recess was taken.)
24 **Q. Doctor Steckel, there came a time, of**
25 **course, when Ethicon applied for the 446 patent, of**

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1 **which you're one of the named inventors. What do**
2 **you recall about the -- your involvement in the**
3 **process of applying for that patent?**
4 MR. BONELLA: And you can talk about
5 facts, but if you had communications with
6 attorneys, that's attorney/client privilege. You
7 shouldn't talk about the substance of
8 communications that you had with attorneys in
9 developing it, but you can talk about facts about,
10 you know, general facts as to what your involvement
11 was.
12 **Q. You know, if I may just clarify Mr.**
13 **Bonella's remarks, at least for purposes of this**
14 **question, I would want to hear about contacts that**
15 **you had with attorneys, though at least for**
16 **purposes of this question, you don't have to tell**
17 **me about the substance of any such contacts.**
18 MR. BONELLA: You can tell him who, what,
19 where, when.
20 THE WITNESS: Right.
21 A. Well, I mean, my overall recollection is
22 fairly vague. I worked with -- the "who" was Matt
23 Goodwin and Rick Skula were the attorneys at
24 Ethicon at the time, although I worked on a couple
25 of different applications, but I believe Matt and

12 (Pages 250 to 253)